Working with students to shape the transitional experience to university education in a trans disciplinary course.

Title

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Rationale

Creative Technologies (CT) is a trans disciplinary course encompassing several diverse areas of study such as audio, computing, coding and visual arts. Making meaningful connections between these disciplines is an underlying aim of the course and by graduation students are able to apply knowledge from all disciplines to certain themes or issues. Jakobs (1989) provides an appropriate analogy which validates this approach; 'when you are out walking, nature does not confront you for an hour with only with flowers and in the next only with animals'.

In year one however, the focus for students is to experience a foundational introduction to all the disciplines the course has to offer. This invariably means all students, regardless of previous experience or background will undertake a discipline which they find both technical and challenging.

As a result, the majority of year one students experience low levels of confidence at some stage during their first semester of study. These confidence issues are exacerbated within the context of a normal transitional experience to third level education.

At the beginning of this project the overall attrition rate for year one students was 23%. Three year one modules had a failure rate of over 20% and one over 50%.

Methodologies

In order to develop a sustainable solution to these issues staff decided it was important to enable students as partners to encourage more personal investment and to help build positive student-staff relationships. Strong et al (1995) states 'most of us work hardest on those relationships that are reciprocal—what you have to offer is of value to me, and what I have to offer is of some value to you'.

Students and staff engaged in student led discovery workshops to openly discuss our challenges, agree a set of aims and to propose interventions to help achieve those aims. This was a participatory exercise with active engagement encouraged.

The agreed aims were:

- Build positive staff-student relationships
- Help students develop team working skills
- Improve student experience and increase confidence and performance across a range of disciplines.

Two interventions were conceived that would help achieve these aims. Firstly, an overnight field trip involving staff and students was arranged. A key message from the What Works? phase 1 Disposition to Stay and Succeed Report (2011) stated students who had experienced extended field trips and activities could not recommend them highly enough. Students have clearly indicated a strengthening of peer / staff relationship and indicated how this could help them with aspects of their academic learning.

During the field trip a hackathon activity was planned. Hackathon activities offer a number of positive ways to assist with achieving project goals. Generally each student / team has one common goal to work towards. Teamwork is essential which helps foster a sense of community and enables students get to know each other more than usual. There is a strong emphasis on creativity and expression, and less so on formal assessment which helps eliminate the fear of failing and encourages students to express themselves both within and outwith their comfort zone. Mann (2001) discusses the need to understand how, when and why students feel alienated within their studies and suggests that focus on performance and assessment can contribute to alienation during a learning experience.

An active and collaborative approach to the hackathon activity was adopted with students developing their own responses to an open project brief in teams set in multiple locations, using various technologies selected by them. Each group met the deliverables within the required time frame and clearly enjoyed the freedom afforded them. Prensky (2001) supports this approach stating that 'by enhancing the play-like qualities of interactions, the whole experience can become ‘not only much more enjoyable and compelling, but also far more effective as well.'

Secondly, a similar strategy was employed within the classroom environment. Student feedback combined with module failure rates indicated that many students suffered from low confidence in the class room when out of their comfort zone, and this was contributing to higher failure rates across all year one modules.

Even with modest failure rates, CRE104 was identified as one of the most challenging modules by staff and students, with most risk of students experiencing low confidence. As such, the application of active and collaborative strategies has always been considered central to teaching, learning and assessment within this module. Staff decided to look at how this could be managed or restructured to increase student confidence levels and improve performance.

Assessment weighting was modified such that collaborative work appears early in term and assessment is low-stake. The collaborative group work is now used as a 'spring board' toward higher stake individual assessment later in the module at which point students will have a fuller grasp of module content and therefore increased confidence levels.

The use of teaching space was also considered. Theoretical sessions were moved from a computer suite to an open space deemed more conducive to active learning and collaboration.

Results / Impact

Please provide evidence of how you know your case study intervention was successful.

In order to evaluate the effectiveness of the interventions we adopted a mixed method approach. A series of of goal focused and goal free questions were designed in line with the project aims for each intervention. Gathering quantitative and qualitative data enabled us to both measure directly the success of the interventions in relation to the project aims, and also to document more nuanced student insights and unintended outcomes. Mertens (2009) agreed that combining quantitative and qualitative approaches help form a more complete understanding.

The most significant evidence of impact was observed through the marked decrease in the year one attrition rate. In 2012/13 CT lost 23% of year one students. In 2013/14 this was reduced to 4.2%. In 2014/15 it was 11.5% which remained under the 14% target.

Another significant change was noted in relation to module failure rates. From 2012/13 to 2013/14 six from eight year one modules noted reductions in failure rates. The other two modules noted a one and two percent rise. CRE116 noted a 50% improvement in student success while CRE103 and CRE113 noted a 12% and 18% improvement respectively.

As a result of the restructuring of module CRE104 in relation to active and collaborative strategies and assessment, 88% of students indicated they felt a strong degree of positivity towards collaborative work, validating the change to assessment practices in keeping collaborative work for the earlier, more basic technical/procedural (and lower stakes) assignment rather than the later assignment, in which creative practice plays a greater role. All student agreed that collaborative work on this module has contributed to fostering a sense of community within the class validating the general philosophy of embedding collaborative work and resultant active learning at some point in this module.

> *'I think working in groups should be considered in all modules'*

> *"In CRE104 we all had different musical tastes but we were able to come to a conclusion on something we could all appreciate and we all found an area we could work on and worked together to fulfill the requirements."*

Students also widely supported a change in assessment approach by staff to run collaborative assignments in a lower stakes mode to encourage creativity. The majority of students agreed that collaborative work happened at the right point in the module.

78% of students agreed that collaborative work makes it easier to learn new topics quickly. The student responses do not indicate an unsophisticated unqualified acceptance of collaborative practices in all cases, but indicate support where the manner of their introduction and management is appropriate to the particular topic and carefully planned.

Removing the fear of assessment was generally supported which is substantiated by Amrein et al (2003) who states that 'when rewards and sanctions are attached to performance on tests, students become less intrinsically motivated to learn and less likely to engage in critical thinking.'

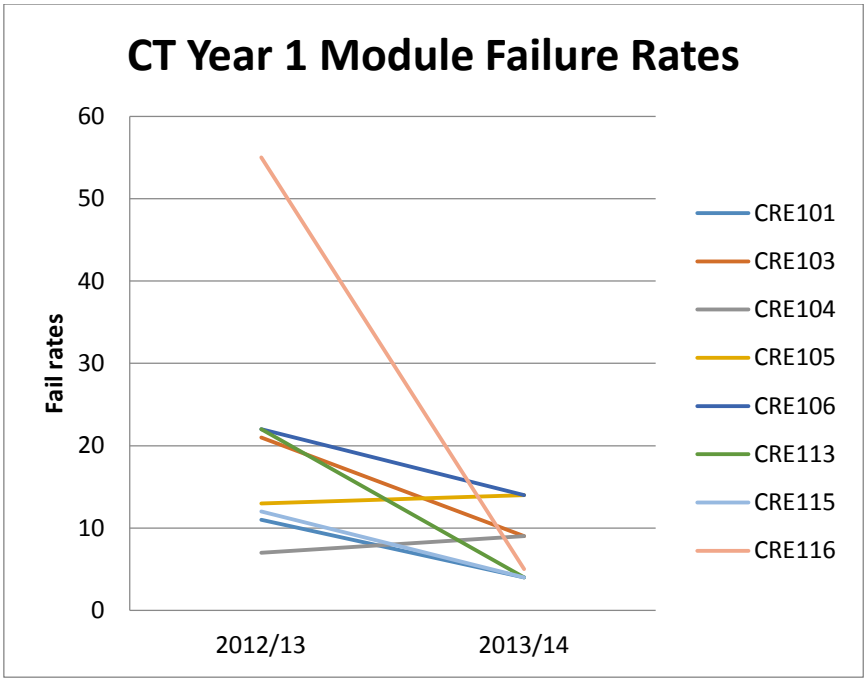


Figure 1. Graph comparison of 2012/13 and 2013/14 CT module failure rates.

Module	2012/13	2013/14	-/+
CRE101	11%	4%	-7%
CRE103	21%	9%	-12%
CRE104	7%	9%	+2%
CRE105	13%	14%	+1%
CRE106	22%	14%	-8%
CRE113	22%	4%	-18%
CRE115	12%	4%	-8%
CRE116	55%	5%	-50%

Figure 2. % change of 2012/13 and 2013/14 CT module failure rates.

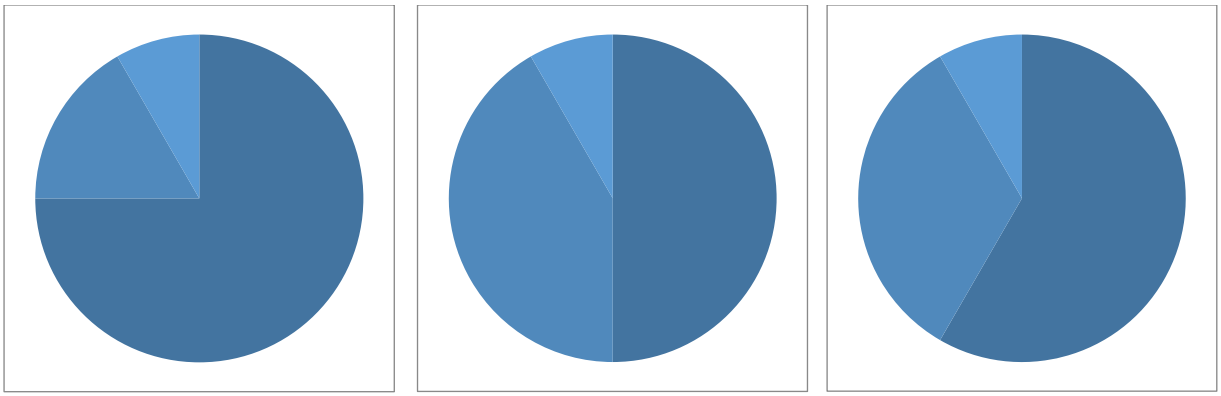
A combination of quantitative and qualitative data was also captured through the use of two student surveys conducted separately to evaluate the impact of the interventions outlined above.

As a result of the student field trip and hackathon activity, 92% of students agreed or strongly agreed the trip allowed them to build relationships with both staff and peers. The same amount felt the experience helped develop team working skills as well as their own interests / goals within their area of study.

Goal free evaluation also indicated that socialising with peers outside of the classroom environment helped build team-working skills and increase confidence levels.

"The most valuable experience from this trip was learning to come out of my comfort zone"

"It was enjoyable working with friends to accomplish the task"



During the trip, I was able to build relationships with both staff and peers

This experience has developed my team working skills

The experience of this trip will help develop my own interests / goals within this course

Figure 3. Student survey / overnight field trip

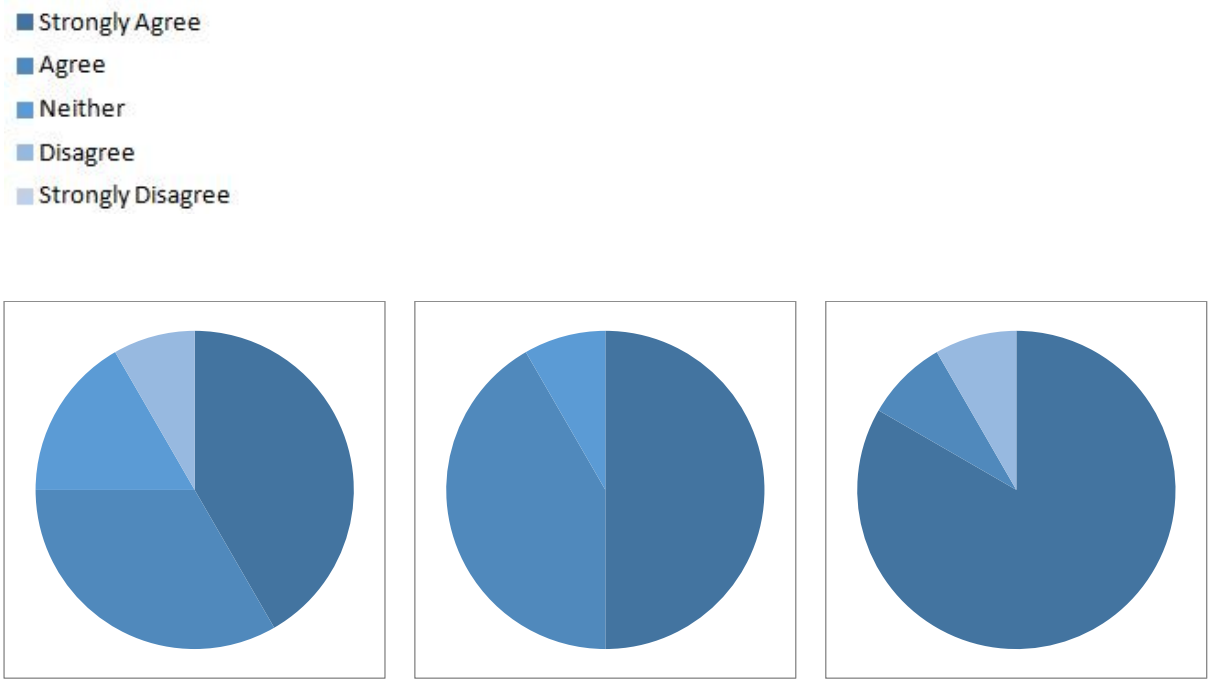


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Figure 4. Student survey / Hackathon activity

Unintended feedback showed a significant number of students felt positively about being empowered as partners within the process. This wasn't one of the aims of the project but as a by product of the approach adopted from the outset. Students led the discovery workshops, the response, intervention identification, led the hackathon event and expressed appreciation at being so closely involved with curriculum management. This helped inspire both confidence and a sense of community amongst students. This reinforced findings from the Phase I Disposition to Stay and Succeed Report (2011) which found that when relationships are positive, students will consult each other rather than lecturers, pooling expertise, using each other to assess the standard of work required and teaching each other. Such relationships are associated with retention, enhanced experience and success.'

Future Work

Looking ahead, briefly say how this work will be taken forward after the end of the change programme.

Staff have already made similar amendments to the management of teaching, learning and assessment strategies in all year one modules based on the positive feedback from the CRE104 interventions. This will be an ongoing process based on student conversation and feedback with careful monitoring of performance at a modular level.

Based on the success of the student trip and hackathon activity staff will endeavour to continue providing a similar platform for students and staff to build relationships and team working skills. The year 1 induction has been identified as another opportunity where new students can part take in an appropriate technical activity with emphasis on introductions to the course, staff and each other without fear of assessment and a genuine emphasis on fun, engagement and creativity.

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